# 2Q FY00 SIP MILESTONE FULL STATUS REPORT

**Strategic Implementation Plan (SIP) Milestone Information** (Review Columns G to I, complete F if appropriate)

As of 6/19/00

| EVAL. | COST | SCHEDULE | TECHNICAL |
|---|---|---|---|
| Blue | EACunder >5% | Ahead > 6 weeks | Met w/less effort |
| Green | EAC w/i 5% | Within 6 weeks | Meets |
| Yellow | EAC over 5-15% | Behind 6-12 weeks | Prob.s Solvable, Action Plan |
| Red | EAC over > 15% | Behind >12 wk, Crit Path | Not Meet, No Action Plan |

SIP MILESTONE EVALUATION (***ACTION: Complete Columns J to M***)

| GRC SIP ID No. | NASA MS | FY | GRC Objectives (In Bold Italic) / Milestones | Planned Date | Actual Date | Owner | Org. | Program/Project/ Process | COST | SCHEDULE | TECHNICAL PERFORM. | DESCRIPTION OF PROBLEM AND ACTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | BLUE | GREEN | YELLOW | RED | |
| **0A1.0** | | 2000 | **GRC Objective A1: Reduce aircraft accidents related to icing, weather, poor visibility, and engine problems; develop technology to prevent and suppress aircraft fires.** | | | C. RUSSO | 2000 | | | | | |
| ***2000A1.1*** | | **2000** | Complete and publish three-dimensional design guidelines for the control of gear crack paths and the prediction of crack growth rates in ultrasafe gears. | ***2Q01*** ~~4Q00~~ | Late 2Q01 | D. Lewicki/ J. Zakrajsek | 5950/ 0300 | Rotorcraft Base/Safe All Weather Ops for RC (581-30) | GREEN | YELLOW | GREEN | The Glenn rotorcraft base program suffered a 40% cut in funds in FY00. As a result, the SILNT program was cut, and the SAFOR program suffered some milestone delays due to the reduced funding levels. This milestone was one of the efforts that had to be delayed due to funding cuts. The delayed milestone was coordinated with the Rotorcraft Base Program Office at Ames. 5000 S. Foust |
| **0A3.0** | | 2000 | **GRC Objective A3: Reduce the perceived noise of future subsonic aircraft engines designed from those designed before 1997 by a factor of two by the year 2007 and by a factor of four by the year 2022.** | | | C. RUSSO | 2000 | | | | | |
| ***2000A3.1*** | ***0R2*** | **2000** | Validate technology to reduce community noise impact by 10 decibels (dB) relative to 1992 technology (engine source noise contribution is a least 6 dB). | 4Q00 | | ***A. Liang*** ~~L. Shaw~~/ ***D. Huff/*** ~~J. Dittmar/~~ ~~R. Woodward/~~ ~~C. Huges/~~ | 2200/ 5940 | Air Frame Systems /Base R&T | GREEN | GREEN | GREEN | 0140 B. Mader On schedule and within cost (no change from previous quarter input). 5000 S. Foust |
| **0A5.0** | | 2000 | **GRC Objective A5: Reduce aircraft engine design, development, acquisition, and maintenance costs to help achieve a 25-percent reduction in 1997 air travel cost by the year 2007 and a 50-percent reduction by the year 2022.** | | | C. RUSSO | 2000 | | | | | |
| ***2000A5.1*** | | **2000** | Demonstrate a 900 deg. F silicon carbide (SiC) pressure sensor on an engine. | 4Q00 | | C. Ginty/ G. Beheim | 2200/ 5510 | ***AeroSpace Propulsion & Power Base Program Higher Operating Temperature Propulsion Components (HOTPC)*** | GREEN | GREEN | GREEN | On schedule, no problems. 0140 B. Mader 5000 S. Foust |
| **0A8.0** | | 2000 | **GRC Objective A8: Develop computing and testing tools to reduce aircraft engine design and development time.** | | | C. RUSSO | 2000 | | | | | |

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| ***2000A8.1*** | | **2000** | Develop ground and flight demonstration capabilities and methodologies for integrated air-breathing propulsion systems for experimental hypersonic vehicles and access to space. | 4Q00 | **Late 1Q01** | D. Palac/ R. Blech | 0142/ 5880 | ***Aerospace Propulsion & Power Base*** ~~Propulsion Systems R&T Base~~/Hybrid Propulsion (HHP) | **GREEN** | **YELLOW** | **GREEN** | 0140 reported schedule as "Yellow." Mixer/combustor and forebody interactions rigs 1 quarter behind due design difficulty; schedule of other project elements adjusted for later receipt of data. 0140 B. Mader --- 0140 PROPOSES THIS MILESTONE SHOULD BE ELIMINATED AS IT DUPLICATES A9.6 0140 B. Mader --- 5000 reported no cost and schedule as "Green" 5000 S. Foust |
| ***2000A8.2*** | | **2000** | Demonstrate real-time, on demand, off-body instrumentation systems suitable for use in high- productivity wind tunnels and aeropropulsion facilities. | 4Q00 | | C. Mercer | 5520 | Information technology base R&T program ***(ITTS)*** | **GREEN** | **GREEN** | **GREEN** | 5000 reported cost as "Yellow." One large purchase will be entered into APRS by 5-31-00. It will solve our costing problem. 5000 S. Foust 0140 reported cost as "Green." 0140 B. Mader |
| **0A9.0** | | 2000 | **GRC Objective A9: Reduce the cost contribution of access-to-space propulsion systems and associated subsystems while improving their performance, life, function and operability.** | | | G. BARNA / ~~F. BERKOPEC~~ ***P. McCallum*** | 6000/ 0140 | | | | | |
| **2000A9.4** | | **2000** | Complete a high voltage modular switch breadboard and select most promising candidates for further development. | 4Q00 | | J. Soeder | 5450 | ***Launch Technology*** ~~Bantam~~ | **GREEN** | **GREEN** | **GREEN** | On schedule to make downselect at end of 4th quarter FY 2000. 5000 S. Foust |
| **0A10.0** | | 2000 | **GRC Objective A10: Develop advanced spacecraft propulsion technology.** | | | G. BARNA | 6000 | | | | | |
| **OngoA10.A** | | **On-going** | Investigate breakthrough propulsion physics. | **On-going** | | M. Millis | ***5870*** ~~5880~~ | Space Transportation Research | **GREEN** | **GREEN** | **GREEN** | All NRA selections on contract, research now underway. 5870 Marc G. Millis |